

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

With respect to the examiner's objection to the Danish foreign priority document applicant asserts that the document provided to the USPTO is a certified copy. As applicant has provided assurance that this is the case, the examiner will presume this to be correct and the objection is withdrawn.

With regard to the closed flow path, the examiner acknowledges that the proposed drawing correction filed December 14, 2000 does remedy this objection and thus the objection is withdrawn. Further the substitute drawing sheets filed with the instant response also remedy the objections to the figures set forth in the previous office action.

With regard to the art rejection, applicant asserts that because the Board of Patent Appeals and Interferences (hereinafter "the Board") held that claim 1 was not anticipated by Eckhouse, because it was determined that Figure 1 of Eckhouse did not teach a fluid in the lamp, while the embodiment of Figure 4 of Eckhouse did not show an aperture or housing. The Board further determined that alternate embodiments in the same reference cannot be combined to support an anticipation rejection. Applicant also notes that the Board held that the combination of Eckhouse and Gustafsson did not render claim 1 *prima facie* obvious because Eckhouse did not disclose a need for cooling the lamp in the embodiment of Figure 1. Continuing applicant asserts that the examiner has not paid appropriate deference to the Board's decision, in asserting the combination of Eckhouse and Berry as rendering at least claim 1 *prima facie* obvious. Must respectfully disagree, the decision of the Board clearly states "[T]he device may be used with a fluid filling the volume between the light source and the optical fiber 46 (Eckhouse, col. 10, ll4-

6). The fluid may be water and is disclosed as being very effective for cooling the light source if high repetition rate pulses are used.” (Board decision at page 5, lines 13-17). While the examiner has employed the Berry reference, which does disclose the use of water, Berry expressly teaches that the radiation passes through a layer of water “which is provided to absorb heat radiations or keep the apparatus cool, or both” (column 1, lines 52-54). Thus clearly, while Berry contemplates keeping the lamp cool with the water, it is equally clear that Berry contemplates using the water for the alternative or additional purpose of blocking the transmission of heat to the surface of the tissue by “absorbing heat radiations” that is to say, providing a filtering function. It is noted that it has long been known in the art that heat radiation is also known as infra red radiation, as discussed by applicant (see the instant response, page 9, first full paragraph). Given that Eckhouse teaches, with respect to the embodiment of Figure 1 thereof, sensing the tissue temperature, to determine that the tissue surface does not get too hot, filtering of the heat radiation from the light source would be desirable, as it would reduce heating of the surface of the skin. Further, it is noted that the temperature measurement of Eckhouse is performed by measuring infrared emissions of the skin. Thus, if substantial infra red radiation is contained in the applied pulse, the measurement of temperature via infrared emissions could be rendered erroneous by the infrared light reflected off the skin during the treatment pulse. Thus the examiner is not relying merely on the cooling the lamp, as referred to in the decision by the Board, but also cooling the tissue (as well as rendering the temperature measurement of Eckhouse more accurate, which is important to prevent unwanted tissue damage – i.e. scarring). Thus it is clear that the examiner has established a proper motivation for combination based not only on the teachings expressed in the references, but also established a basis for obviousness

under additional rationales, including simple substitution for one known element for another to obtain predictable results, use of known technique to improve similar devise in the same way, applying a known technique to a known device ready for improvement to yield predictable results, obvious to try, and the presence of a teaching, motivation, or suggestion.

It appears that applicant has read the language in the decision of the Board too broadly and misconstrued the rationale employed by the Board in overturning the examiner's rejection based on Eckhouse and Gustafsson alone. Nowhere in the decision has the Board determined that preventing the heating of the tissue surface is inapposite to the teachings of Eckhouse, the combination including Eckhouse before the Board having been overturned on the basis of Gustafsson not remedying the deficiencies of the embodiment of Figure 4 of Eckhouse. However, all the instant rejections are and have been based on the embodiment of Figure 1 of Eckhouse. Thus the examiner is according full deference to the decision of the Board, and has properly combined the applied reference in full compliance with the decision rendered by this esteemed body.

Applicant points to the disclosure of Eckhouse at column 7, lines 34-41, which discusses the application of light to evaporate a mark on the surface of the skin as evidence that Eckhouse would not use water as a filter in the embodiment of Figure 1 thereof. However, this does not contraindicate the use of such a filter when using the embodiment of Figure 1 to provide deeper penetration, for example the treatment of blood vessels, which use long pulses (see Eckhouse, column 5, line 45 to column 6, line 3) in contradistinction to the extremely short pulse application discussed at column 7 and referenced by applicant. Having established a firm basis for combining the Berry reference with the embodiment of Figure 1 of Eckhouse, the bulk of the

remainder of applicant's arguments, drawn to the erroneous perception of lack of deference for the decision of the Board and the inability of the combination of the previously applied references with the embodiment of Figure 4 of Eckhouse, are not convincing.

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It is noted that the claims contain various functional recitations that are of the form to constitute a means plus function recitation under section 112, sixth paragraph: "means for defining a flow path for said water" and "means is provided for adjusting said time weighted average light power output..." (see MPEP 2181).

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "said flow path forms a closed circuit". Claim 3 is objected to as being of improper form, this claim include a means plus function recitation, by virtue of dependence on claim 2, but define substantial structures, materials, or acts defining the function, and thus are of improper form for a means plus function recitation (see MPEP 2181).

Claims 1 and 23 are rejected under 3 U.S.C. 103(a) as being unpatentable over Eckhouse in combination with Berry. Eckhouse teaches a device as claimed except for the specific recitation of the use of water in conjunction with the embodiment otherwise reading on the claims. Berry teaches an arc lamp using water to filter infra red and cool the lamp as well as an applicator with a convex tip. It would have been obvious to the artisan of ordinary skill to employ the cooling system of Berry in the device of Eckhouse, since Eckhouse teaches that it is important to keep the tissue surface cool, thus producing a device such as claimed.

Claims 1-3 and 8 are rejected under 3 U.S.C. 103(a) as being unpatentable over Eckhouse in combination with Berry as applied to claims 1 and 23 are above, and further in view of Gustafsson. Gustafsson teaches a xenon lamp using circulating water to cool flash tubes and an optical fiber applicator with a convex tip. It would have been obvious to the artisan of ordinary skill to employ the lamp and cooling system; of Gustafsson in the device of Eckhouse as modified by Berry, since the cooling system of Gustafsson makes the lamp much more effective (see column 2, line 62 to column 3, line 6), thus producing a device such as claimed.

Claims 10-15, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckhouse in combination with Berry and Gustafsson as applied to claims 1-3 and 8 above, and further in view of Anderson et al and Optoelectronics. Optoelectronics teaches the use of power supplies that use simmers circuits and apply square pulse to the flask tube. Anderson et al teach the use of square wave pulses and a convex applicator tip. It would have been obvious to the artisan of ordinary skill to employ an applicator tip as taught by Anderson et al since this allows treatment of a larger area, as taught by Anderson et al; to employ the square wave light pulses therein, since this allows a more uniform optical field; to apply a simmer circuit and a power supply to produce square pulses, since these will aid in the production of flat topped optical pulses, which is desirable as taught by Anderson et al; and to provide a concave or parallelepiped shape at the light guide distal end, since these are equivalent to the convex tip and provide no unexpected result, thus producing a device such as claimed.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckhouse in combination with Berry and Gustafsson as applied to claims 1-3 and 8 are above, and further in view of Vassiliadis et al. Vassiliadis et al teach the desirability of employing an interlock on a

filter. It would have been obvious to the artisan of ordinary skill to employ an interlock on the filter in the device of Eckhouse or Gustafsson since this would provide a safer device, thus producing a device such as claimed.

Applicant's arguments filed February 27, 2008 have been fully considered but they are not persuasive. The arguments are not persuasive for the reasons set forth above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to david shay whose telephone number is (571) 272-4773. The examiner can normally be reached on Tuesday through Friday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II, can be reached on Monday, Tuesday, Wednesday, Thursday, and Friday. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/david shay/

Primary Examiner, Art Unit 3735